

WHAT IS CLAIMED IS:

1. An article moving apparatus for moving articles,
comprising:

5 a rotating shaft;

a supporting member provided so as to be rotatable around
said rotating shaft;

at least one accommodating unit provided on the
circumference, centered on said rotating shaft, of said
10 supporting member for accommodating said articles; and

a rotation driving device for rotating said supporting
member around said rotating shaft,

said accommodating unit being provided on a supporting
shaft inclined to said rotating shaft.

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2. The article moving apparatus according to claim 1,
wherein

said accommodating unit includes a plurality of
accommodating units distributed on the circumference, centered
20 on said rotating shaft, of said supporting member.

3. The article moving apparatus according to claim 1,
wherein

said accommodating unit has at least one peripheral
25 surface member provided so as to be capable of freely opening

and closing with respect to said supporting shaft and forming a cylinder extending along said supporting shaft in its closed state.

5 4. The article moving apparatus according to claim 1, wherein

said accommodating unit has an opening receiving the articles on a side different from said peripheral surface member.

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5. The article moving apparatus according to claim 3, further comprising

an opening and closing device for opening said peripheral surface member when said accommodating unit is at a
15 predetermined position.

6. The article moving apparatus according to claim 5, wherein

said peripheral surface member has a first engaging
20 portion, and

said opening and closing device has a second engaging portion for opening said peripheral surface member by engaging said first engaging portion of said peripheral surface member.

25 7. The article moving apparatus according to claim 1,

wherein

said rotating shaft is inclined at an angle of 45 degrees to the horizontal direction, and

said supporting shaft is inclined at an angle of 45
5 degrees to said rotating shaft.

8. The article moving apparatus according to claim 1, further comprising

a vibrating device for vibrating said accommodating
10 unit.

9. A direction changing apparatus for sticks that changes the direction of alignment of the sticks, comprising:

a rotating shaft;

15 a supporting member provided so as to be rotatable around said rotating shaft;

at least one accommodating unit provided on the circumference, centered on said rotating shaft, of said supporting member; and

20 a rotation driving device for rotating said supporting member around said rotating shaft,

said accommodating unit accommodating the sticks while aligning the sticks along a supporting shaft inclined to said rotating shaft.

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10. The direction changing apparatus for sticks according to claim 9, wherein

said accommodating unit includes a plurality of accommodating units distributed on the circumference, centered
5 on said rotating shaft, of said supporting member.

11. The direction changing apparatus for sticks according to claim 9, wherein

said accommodating unit has at least one peripheral
10 surface member provided so as to be capable of freely opening and closing with respect to said supporting shaft and forming a cylinder extending along said supporting shaft in its closed state.

15 12. The direction changing apparatus for sticks according to claim 9, wherein

said accommodating unit has an opening receiving the articles on a side different from said peripheral surface member.

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13. The direction changing apparatus for sticks according to claim 11, further comprising

an opening and closing device for opening said peripheral surface member when said accommodating unit is at a
25 predetermined position.

14. The direction changing apparatus for sticks according to claim 13, wherein

said peripheral surface member has a first engaging
5 portion, and

said opening and closing device has a second engaging portion for opening said peripheral surface member by engaging said first engaging portion of said peripheral surface member.

10 15. The direction changing apparatus for sticks according to claim 9, wherein

said rotating shaft is inclined at an angle of 45 degrees to the horizontal direction, and

said supporting shaft is inclined at an angle of 45
15 degrees to said rotating shaft.

16. The direction changing apparatus for sticks according to claim 9, further comprising

a vibrating device for vibrating said accommodating
20 unit.